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**AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the Federal Clean Water Act as amended, (33 U.S.C. §§1251 et seq.; the "CWA", and the Massachusetts Clean Waters Act, as amended, (M.G.L. Chap. 21, §§26-53),

**Eastman Gelatine Corporation
227 Washington Street
Peabody, MA 01960**

is authorized to discharge from a facility located at

**227 Washington Street
Peabody, MA 01960**

to receiving waters named

Goldthwait Brook

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective (see **** below)

This permit and the authorization to discharge expire at midnight, on

This permit supersedes the permit issued on September 29, 1987 and modified July 13, 1989.

This permit consists of 11 pages in Part I including effluent limitations, monitoring requirements, etc., 13 pages in Attachment A Freshwater Chronic Toxicity Test Procedure and Protocol, and 27 pages in Part II including General Conditions and Definitions.

Signed this day of

Linda M. Murphy, Director
Office of Ecosystem Protection
Environmental Protection Agency
Boston, MA

Glenn Haas, Director
Division of Watershed Management
Department of Environmental Protection
Commonwealth of Massachusetts
Boston, MA

*** This permit will become effective on the date of signature if no comments are received during public notice. If comments are received during public notice, this permit will become effective on the first day of the calendar month immediately following 60 days after signature.

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PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date and lasting through expiration the permittee is authorized to discharge from outfall serial number **001** non-contact cooling water and storm water to Goldthwait Brook. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Units	Discharge Limitations		Monitoring Requirement ⁽¹⁾	
		Average Monthly	Maximum Daily	Measurement Frequency	Sample Type
Dry Weather Flow ⁽²⁾	MGD	0.08	Report	Continuous	Recorder
Wet Weather Flow	MGD	Report	----	1/Month ⁽³⁾	Estimate
Temperature	°F	----	83.0	Weekly	Dry Weather Grab
pH ⁽⁴⁾	S.U.	----	6.5 to 8.0	Weekly	Grab
Oil and Grease	mg/l	----	5.0	Quarterly ⁽³⁾	Wet Weather Grab ⁽⁵⁾
Total Suspended Solids	mg/l	----	Report	Quarterly ⁽³⁾	Wet Weather Grab ⁽⁵⁾
Whole Effluent Toxicity LC ₅₀ ⁽⁶⁾	%	----	Report	2/Year ⁽⁷⁾	Dry Weather Grab
C-NOEC	%	----	Report	2/Year ⁽⁷⁾	Dry Weather Grab

See page 3 for explanation of footnotes.

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Footnotes (Outfall 001):

1. All samples shall be collected prior to discharge into Goldthwait Brook.
2. For Dry Weather Flow, the permittee shall report the maximum daily flow rate of cooling water discharged by the facility during the reporting period. The average daily flow shall be calculated based on totalizer flow results or an approved equivalent flow measuring device.
3. Sampling frequency of 1/month is defined as the sampling of one (1) event in each calendar month. Sampling frequency of quarterly is defined as the interval of time between the months of: January through March, inclusive; April through June, inclusive; July through September, inclusive; and October through December, inclusive. **Quarterly sampling shall be performed concurrently with the monthly flow monitoring event.** The permittee shall submit the results to EPA and MassDEP of any additional testing done to that required herein, if it is conducted in accordance with EPA approved methods consistent with the provisions of 40 CFR § 122.41(l)(4)(ii).
4. See Part I.A.4., Page 5
5. For rain events beginning between the hours of 7 A.M. and 6 P.M., wet weather grab samples shall be taken within two hours of initiation of the discharges. All other wet weather grab samples shall be taken within four hours of initiation of the discharge.
6. The LC₅₀ (Lethal Concentration 50 percent) is the concentration of waste water (cooling water discharges) causing mortality to 50 percent (%) of the test organisms.
7. The C-NOEC is (chronic-no observed effect concentration) is defined as the highest concentration of toxicant or effluent to which organisms are exposed in a life cycle or partial life cycle test which causes non adverse effect on growth, survival, or reproduction at a specific time of observation as determined from hypothesis testing where the test results exhibit a linear dose-response relationship. However, where the test results do not exhibit a linear dose-response relationship, the permittee must report the lowest concentration where there is no observable effect.
8. The permittee shall conduct chronic (and modified acute) toxicity tests twice per year. The chronic test may be used to calculate the acute LC50 at the 48 hour exposure interval. The permittee shall test the daphnid, ceriodaphnia dubia, and fathead minnows, pimephales promelas. Toxicity test samples shall be collected during the second weeks of May and November. The test results shall be submitted by the last day of the month following the completion of the test. The tests must be performed in accordance with test procedures and protocols specified in Attachment A of this permit.

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PART I.A (cont.)

2. During the period beginning on the effective date and lasting through expiration the permittee is authorized to discharge from outfall serial numbers **01A, 01B, 002, 003, 004, 005, 05A, 006, 06A, 007, 07A, 008, 08A, 009, 010, 011, 012, 013, 014, 015, 016 and 017** storm water to Goldthwait Brook. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Units	Discharge Limitations		Monitoring Requirement ⁽¹⁾	
		Average Monthly	Maximum Daily	Measurement Frequency	Sample Type
Wet Weather Flow	MGD	Monitor	----	1/Month ⁽²⁾	Estimate
pH ⁽³⁾	S.U.	----	6.5 to 8.0	1/Month ⁽²⁾	Wet Weather Grab ⁽⁴⁾
Oil and Grease	mg/l	----	5.0	Quarterly ⁽²⁾	Wet Weather Grab ⁽⁴⁾
Total Suspended Solids	mg/l	----	Report	Quarterly ⁽²⁾	Wet Weather Grab ⁽⁴⁾
Total Copper ⁽⁵⁾	mg/l	----	Report	2/year	Wet Weather Grab ⁽⁴⁾
Total Lead ⁽⁵⁾	mg/l	----	Report	2/year	Wet Weather Grab ⁽⁴⁾
Total Zinc	mg/l	----	Report	2/year	Wet Weather Grab ⁽⁴⁾

Footnotes:

1. All samples shall be collected prior to discharge into Goldthwait Brook. Outfall 010 shall be sampled prior to combining with any other waste water. Grab samples from Outfalls 006, 06A, 007, 07A, 008 and 08A shall be combined in equal portions into a single sample to be known and reported as "Composite 13A". Grab samples from Outfalls 01A, 003, and 05A shall be combined in equal portions into a single sample to be known and reported as "Composite 4A". Grab samples from Outfalls 01B, 002, 004, 005, 009, 010, 011, 012, 013, 014, 015, 016 and 017 shall be taken as individual samples without mixing.
2. Sampling frequency of 1/month is defined as the sampling of one (1) event in each calendar month. Sampling frequency of quarterly is defined as the interval of time between the months of: January through March, inclusive; April through June, inclusive; July through September, inclusive; and October through December, inclusive. **Quarterly sampling shall be performed concurrently with the monthly flow monitoring event.** The permittee shall submit the results to EPA and MassDEP of any additional testing done to that required herein, if it is conducted in accordance with EPA approved methods consistent with the provisions of 40 CFR § 122.41(l)(4)(ii).
3. See Part I.A.4., Page 5
4. For rain events beginning between the hours of 7 A.M. and 6 P.M., wet weather grab samples shall be taken within two hours of initiation of the discharges. All other wet weather grab samples shall be taken within four hours of initiation of the discharge.
5. Detection limits shall be 0.005 mg/l for total copper analyses and 0.001 mg/l for total lead analyses.

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PART I.A (cont.)

3. The discharges either individually or in combination shall not cause a violation of State Water Quality Standards of the receiving waters.
4. The pH of the effluent shall not be less than 6.5 or greater than 8.3 standard units at any time unless these values are exceeded as a result of natural causes.
5. The discharge shall not cause objectionable discoloration of the receiving waters.
6. The effluent shall contain neither visible oil sheen, foam, nor floating solids at any time.
7. The discharge shall not contain materials in concentrations or combinations which are hazardous or toxic to human health, aquatic life of the receiving waters or which would impair the uses designated by its classification.
8. The discharge shall not impart color taste, turbidity, toxicity, radioactivity or other properties which cause those waters to be unsuitable for the designated uses and characteristics ascribed to their use.
9. Notwithstanding specific conditions of this permit, the effluent must not lower the quality of any classified body of water below such classification, or lower the existing quality of any body of water if the existing quality is higher than the classification.
10. Chemicals (i.e. disinfecting agents, detergents, emulsifiers, etc.), bioremedial agents, including microbes, shall not be added to the cooling water without prior approval by the U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) to prevent hydrocarbon and/or particulate matter carryover into the Chelsea River.
11. EPA may modify this permit, in accordance with EPA regulations in 40 Code of Federal Regulations (CFR) §122.62 and §122.63, to incorporate more stringent effluent limitations, increase the frequency of analyses, or impose additional sampling and analytical requirements.
12. Upon request of the permittee, EPA and MassDEP may reduce the frequency of pH, TSS, and/or oil and grease monitoring required at individual outfalls (with the exception of Outfall 001), based on 12 consecutive rounds of sampling and upon request from the permittee.
13. Within eighteen months of the effective date of the permit, the permittee shall submit to EPA and MassDEP the results of a study which shall examine the effects of rain water on the permitted storm water discharges as well as the effect of storm water discharges on the pH of the receiving water, Goldthwait Brook. At a minimum, this study shall incorporate pH data from at least twelve consecutive monthly effluent samples of storm water (from all outfalls), rainwater and the receiving water (upstream and downstream). If the pH of the storm water outfall discharges is found to be outside the range of 6.0 to 8.3 due to conditions other than the naturally occurring pH of rain water, the study submittal shall include a mitigation plan with an implementation schedule for storm water management changes and any resulting changes to the facility's Best Management Practices/Storm Water Pollution Prevention Plan.
14. The permittee shall attach a copy of the laboratory case narrative to the respective Discharge

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Monitoring Report Form submitted to EPA and MassDEP for each sampling event reported. The laboratory case narrative shall include a copy of the laboratory data sheets for each analysis (identifying the test method, the analytical results, and the detection limits for each analyte) and provide a brief discussion of whether all appropriate QA/QC procedures were met and were within acceptable limits.

15. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:
 - a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
 - i. One hundred micrograms per liter (100 ug/l);
 - ii. Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
 - iii. Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 C.F.R. §122.21(g)(7); or
 - iv. Any other notification level established by the Director in accordance with 40 C.F.R. §122.44(f).
 - b. That any activity has occurred or will occur which would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
 - i. Five hundred micrograms per liter (500 ug/l);
 - ii. One milligram per liter (1 mg/l) for antimony;
 - iii. Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 C.F.R. §122.21(g)(7); or
 - iv. Any other notification level established by the Director in accordance with 40 C.F.R. §122.44(f).
 - c. That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the permit application.
16. This permit may be modified, or revoked and reissued, on the basis of new information in accordance with 40 CFR 122.62.

B. BEST MANAGEMENT PRACTICES/STORM WATER POLLUTION PREVENTION PLAN

1. The permittee shall maintain, update and implement the Best Management Practices Plan to account for any changes that occur at the facility which could impact the plan. The permittee shall be required to provide an annual report that includes the proper certification to EPA and the MassDEP documenting that the previous year's inspections and maintenance activities were conducted, results recorded, records maintained, and that the facility is in compliance

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with the BMPP.

2. The certification shall be signed in accordance with the requirements identified in 40 CFR §122.22 and a copy of the certification shall be sent each year to EPA and MassDEP as well as appended to the BMPP within thirty (30) days of the annual anniversary of the effective date of the Draft Permit. The permittee shall keep a copy of the most recent BMPP at the facility and shall make it available for inspection by EPA and MassDEP.
3. The BMPP shall contain the elements listed below. The detailed requirements for each element can be found in Section 4 of the Storm Water Multi-Sector General Permit at 65 FR 64812-64815 (2000).
 - a. Pollution Prevention Team
 - b. Site Description
 - c. Receiving Waters and Wetlands
 - d. Summary of Potential Pollutant Sources
 - e. Spills and Leaks
 - f. Sampling Data
 - g. Storm Water Controls

C. MONITORING AND REPORTING

Monitoring results obtained during the previous month shall be summarized for each month and reported on separate Discharge Monitoring Report Form(s) postmarked no later than the 15th day of the month following the effective date of the permit.

Signed and dated originals of these, and all other reports required herein, shall be submitted to the Director and the State at the following addresses:

Environmental Protection Agency
Water Technical Unit (SEW)
P.O. Box 8127
Boston, Massachusetts 02114

The State Agency is:

Massachusetts Department of Environmental Protection
Bureau of Waste Prevention
Central Regional Office
627 Main Street
Worcester, MA 01608

Signed and dated toxicity test reports and DMRs required by this permit shall be submitted to the State at:

Massachusetts Department of Environmental Protection
Division of Watershed Management
Surface Water Discharge Permit Program
627 Main Street, 2nd Floor
Worcester, Massachusetts 01608

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D. STATE PERMIT CONDITIONS

1. This Discharge Permit is issued jointly by the U. S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) under Federal and State law, respectively. As such, all the terms and conditions of this permit are hereby incorporated into and constitute a discharge permit issued by the Commissioner of the Massachusetts Department of Environmental Protection pursuant to M.G.L. Chap. 21, §43.
2. Each Agency shall have the independent right to enforce the terms and conditions of this permit. Any modification, suspension or revocation of this Permit shall be effective only with respect to the Agency taking such action, and shall not affect the validity or status of this Permit as issued by the other Agency, unless and until each Agency has concurred in writing with such modification, suspension or revocation. In the event any portion of this Permit is declared, invalid, illegal or otherwise issued in violation of State law such permit shall remain in full force and effect under Federal law as an NPDES Permit issued by the U.S. Environmental Protection Agency. In the event this Permit is declared invalid, illegal or otherwise issued in violation of Federal law, this Permit shall remain in full force and effect under State law as a Permit issued by the Commonwealth of Massachusetts.